

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

15-35. Cancelled

36. (Previously presented) An antimicrobial and non-cytotoxic layered material, comprising:

a) a biocide layer having a biocidal active agent,

and

b) a transport control layer covering the biocide layer, having a thickness and porosity adjusted to release an antimicrobial and non-cytotoxic quantity of the biocidal active agent out of the biocide layer and through the transport control layer,

wherein the transport control layer is a plasma polymer layer and/or a sputter-applied layer and wherein the transport control layer has a silicon content of 20 to 60%, a carbon content of 10 to 30% and an oxygen content of 30 to 50%.

37. (Previously presented) A layered material according to claim 36, wherein the transport control layer has a gas permeability for oxygen (O₂) which is in the range from 100 to 1000 (cm³ bar)/(day m²).

38. (Previously presented) A layered material according to claim 36, wherein the transport control layer has a gas permeability for oxygen (O₂) which is preferably in the range from 500 to 700 (cm³ bar)/(day m²).

39. (Previously presented) A layered material according to claim 36, wherein the biocidal active agent is selected from the group consisting of silver, copper and zinc, their ions and their metal complexes, or a mixture or alloy comprising two or more of said elements.

40. (Previously presented) A layered material according to claim 36, wherein the biocidal active agent is an inorganic biocide having a mean particle size of 5-100 nm.

41. (Previously presented) A layered material according to claim 36, wherein the biocide layer further comprises: gold, platinum, palladium, iridium, tin, antimony, their ions, their metal complexes, or an alloy of the biocidal active agent with one or more of said elements.

42. (Previously presented) A layered material according to claim 36, wherein the transport control layer comprises a substrate material that is selected from the group consisting of

a) an organic substrate material, selected from the group consisting of a plasma polymer, a sol-gel, a coating, and a siliconised substrate material,

b) an inorganic substrate material, selected from the group consisting of SiO₂ and SiC, a metal oxide and a non-biocidal metal, and

c) a combination thereof.

43. (Previously presented) A layered material according to claim 42, wherein the metal oxide is TiO_2 , Al_2O_3

or a combination thereof, and wherein the non-biocidal metal is titanium, medical stainless steel, or a combination thereof.

44. (Previously presented) A layered material according to claim 36, wherein the biocide layer has a mean thickness of 5-100 nm.

45. (Previously presented) A layered material according to one claim 36, wherein the transport control layer has a mean thickness of 5-500 nm.

46. (Previously presented) A medical product comprising an antimicrobial, non-cytotoxic layered material according to claim 36.

47. (Withdrawn) A method for producing an antimicrobial, non-cytotoxic layered material according to claim 36, comprising by the steps:

a) providing a solid body provided with a biocide, and

b) providing the solid body with a transport control layer, in order to release an antimicrobial and non-cytotoxic quantity of the biocidal active agent out of the biocide layer and

through the transport control layer, by plasma polymerisation and/or by sputter application, such that the transport control layer has a silicon content of 20 to 60%, a carbon content of 10 to 30% and an oxygen content of 30 to 50%.